

Fuel Injection Pump Housing & Governor

Remove & Install Fuel Injection Pump Housing & Governor 1286-010

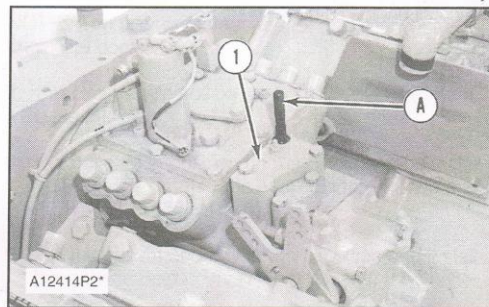
Tools Needed		A	B
3P1544	Pump Timing Pin	1	
6V4069	Body Group		1

Start By:

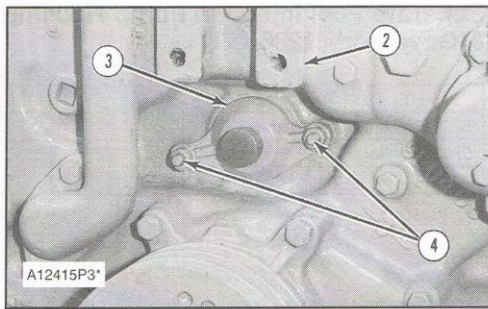
- a. remove fuel injection lines
- b. remove raw water aftercooler and air inlet manifold

FLUID SPILLAGE CONTAINMENT

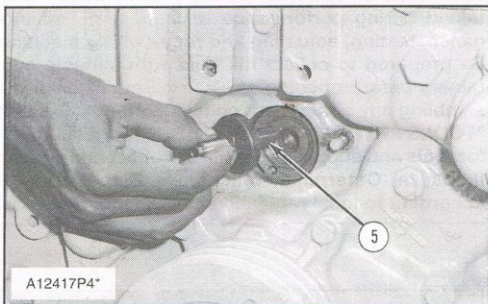
Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the machine. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids. Refer to "TOOLS AND SHOP PRODUCT GUIDE, NENG2500", for tools and supplies suitable to collect and contain fluids in Caterpillar machines. Dispose fluids according to local regulations and mandates.



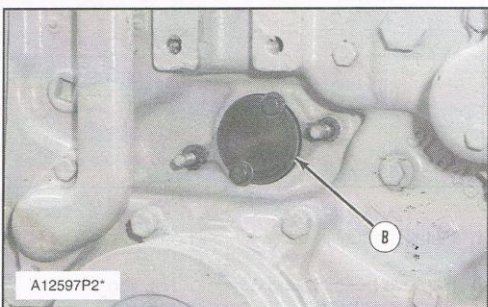
1. Remove the plug from cover (1) and install Tool (A). Turn the crankshaft (clockwise) until the timing pin drops into the groove (slot) in the fuel injection pump camshaft.



- Remove two nuts (4) and tachometer drive cover (3) from front cover (2).

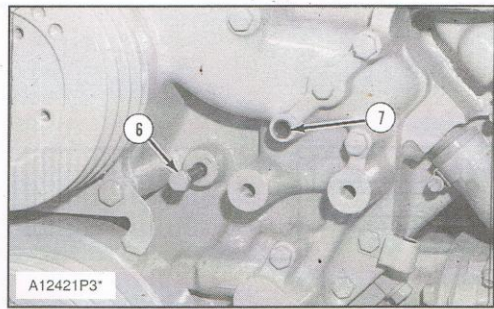


- Remove tachometer drive shaft (5).

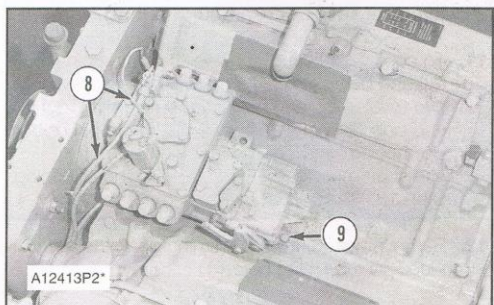


Old 5P-2371 Puller Plate shown for location purposes only.

- Install Tooling (B) into the camshaft drive gear for the fuel injection pump. Turn the center bolt of Tooling (B) until the drive gear is free of the shaft. Remove Tooling (B).



- Remove the plug from the timing hole in the front cover and install a **5/16-18 NC bolt (6) 63.5 mm (2.50 in) Long**. The cover bolt from hole (7) can be used. Turn the crankshaft (clockwise) until bolt (6) can be installed into the timing gear and is in the center of the timing hole. The camshaft for the fuel injection pump is now in correct time to the engine.



- Remove lines (8) and bolts (9).
- Remove the fuel injection pump housing and governor as a unit.

NOTE: The following steps are for installation of the fuel injection pump housing and governor.

- Put the fuel injection pump housing and governor in position on the engine.
- Install bolts (9) and lines (8).

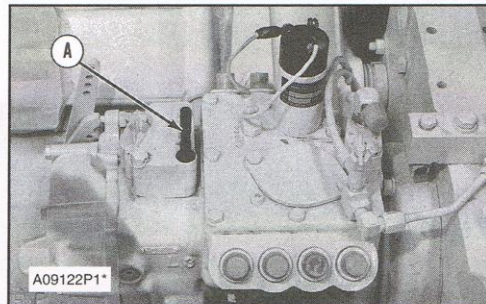
Automatic Timing Advance

Remove & Install Automatic Timing Advance 1272-010

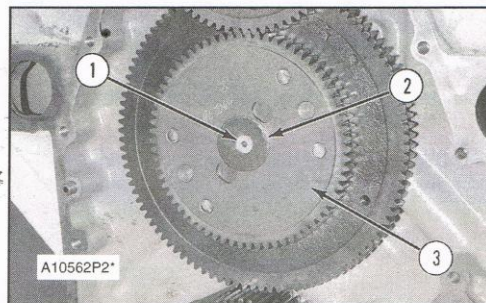
Tools Needed		A
3P1544	Pump Timing Pin	1

Start By:

- a. remove timing gear cover and oil pump

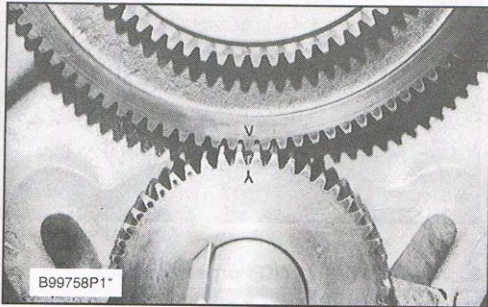


1. Remove the plug from the fuel injection pump housing and install timing pin (A).
2. While turning the crankshaft clockwise (as seen from the front of the engine), push on the timing pin (A) until it slides into the groove (slot) in the fuel injection pump camshaft.

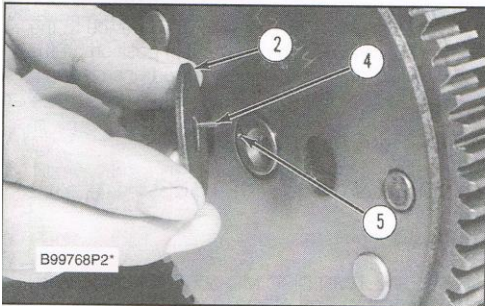


3. Remove screw (1) and washer (2).
4. Remove automatic timing advance (3).

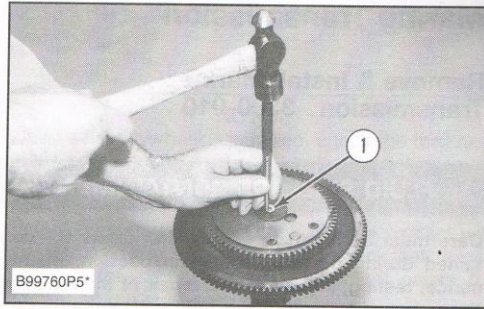
NOTE: The following steps are for installation of the automatic timing advance.



5. If the timing mark on the crankshaft and the timing mark on the camshaft gear are not in alignment, turn the crankshaft clockwise (as seen from the front of the engine) until the marks are in alignment.
6. Put the dowels in the gear in alignment with the holes in the weights and install automatic timing advance (3).



7. Put pin (4) in washer (2) in alignment with hole (3) and install the washer.



Camshaft removed for photographic purposes only

NOTICE

Put marks (stake) on screw (1) carefully. Too much force pushes the shaft extension into the camshaft and takes away all end clearance.

8. Install screw (1) and tighten it to a torque of **7.9 ± 0.6 N·m (70.00 ± 5.00 lb in)**. Put marks (stake) on the screw in two places with a hammer and punch.
9. After marks (stake) are put on screw (1), the end clearance for the gear and weight assembly must be **0.08 to 0.94 mm (.003 to .037 in)**. This end clearance will prevent binding against the washer, camshaft end, or camshaft gear.

NOTE: For more detailed information regarding the automatic timing advance, see the topic "Automatic Timing Advance Unit" in the Specifications Manual.

End By:

- a. install timing gear cover and oil pump